



Desalination Market in Spain

U.S. Foreign Commercial Service, Madrid, Spain

Summary:

Spain's current water shortage provides opportunities for U.S. exporters that specialize in water treatment, desalination, and related products. The Spanish Government is undertaking a large public works program that will change its national water system, significantly increasing the number of desalination plants in order to meet growing water demand. This multi-billion Euro program will involve partial funding from the European Union. Opportunities exist for construction, engineering, and water treatment equipment and service firms.

Market Overview:

The previous Spanish national water plan, the 2001 "Plan Hidrológico Nacional" (National Hydrological Plan), was intended to bring water from well-supplied northern areas of Spain to those most affected by drought and expansion of demand. This plan was partially revised when President Zapatero took office in 2004. Some environmentalists had objected to the 2001 plan, which would have built dams in many untouched areas of the Spanish countryside. Moreover, the European Parliament opposed funding, arguing the original plan contradicted some existing objectives of the EU pertaining to water usage.

The Zapatero Government developed a new program called "Programa A.G.U.A.," (Actuaciones para la Gestión y la Utilización del Agua: Intervention for the Management and Utilization of Water), which will replace some of the actions initially planned in the 2001 Hydrological National Plan. The A.G.U.A. Program intends to obtain water from rivers and the ocean, as well as to better re-use of treated wastewaters. Over 20% of the projected actions under this program are desalination projects. Almost 50% of the water resulting from the A.G.U.A. Program will come from desalination, over 20% from wastewater reuse actions, 15% from irrigation systems modernization and 15% from other efficiency improvements. The A.G.U.A. Program total budget is about 3.8 billion Euros.

Desalination has existed in Spain for decades. In fact, the Canary Islands were the first to try this in the 1970s, and the southern city of Alicante already receives 40% of its water from desalination facilities. There are more than 700 desalination facilities in Spain, but the majority of them are small. Of them, 47% take water from the ocean and have a functioning capacity of over 800,000 cubic meters of water a day. In order to keep costs low, the ideal is to utilize the closest resources available, which in turn saves on costs from transporting water. In general, desalination costs have decreased by half during the last 10 years.

The A.G.U.A. Program is being implemented immediately, and the government has made it clear that it will take a modular approach, allowing for flexibility and changes as the project progresses. The first desalination plants will be developed along the Mediterranean coast, and more specifically in the hydrographic river basins of the South of Spain and the Segura, Júcar, and Ebro rivers, in addition to the internal basins of Catalunya. The initial phases of the national water plan are set for 2005, with the immediate goal of providing potable water to the

four autonomous communities bordering the Mediterranean coast. The following table displays the first production areas, with an idea of cost and plan projections.

Rivers	Number of Plans	Cubic hectometers of treated water per year	Investment in millions of Euros
C.H. del Sur	17	312	554
C.H. del Segura	24	336	1,336
C.H. del Jucar	40	270	798
C.H. del Ebro and C.I. of Cataluna	24	145	1,110

Market Trends:

Within the A.G.U.A. Program, there are to be over twenty new desalination plants. The table below provides details on the location, number, volumes, and estimated costs involved.

DESALINATION PROJECTS BY PROVINCES			
PROVINCES	NUMBER OF PROJECTS	WATER TREATED (Hm ³ /year)	INVESTMENT (million Euros)
ALICANTE	7	141	292
ALMERIA	5	165	226
BARCELONA	1	60	176
GIRONA	1	10	25
MALAGA	2	50	70
MURCIA	6	140	402
TOTAL	22	566	1,191

A Spanish Government company called AcuaMed has been established to plan and execute most of these projects. As the country is unfortunately experiencing a severe drought this year, the government is under particular pressure to increase water supply. Bidders for the twenty new desalination facilities will compete on the basis of the cost to build and operate the new facilities. AcuaMed will buy the water produced and be responsible for price-setting and distribution to consumers. The production cost of desalinated water is expected to be in line with current residential water charges; it is expected to be higher than current charges for water used in agricultural.

Additional water supply is needed along Spain's Mediterranean coast to meet growing demand from expansion of residential construction as well as new tourist developments such as golf courses. Tourism is enormously important in these coastal areas, and is getting bigger. In light of the new plan, which brings the promise of water, additional golf courses are to be built, and each can use the equivalent of what a town of around 8,000 to 10,000 people would

normally use. Currently, of the total amount of desalinated water in Spain, city residents and industries use 72%, while the rest is used for irrigation¹.

Import Market:

Industry sources estimate that the 20 new plants will require over US\$200 million worth of membranes. (All of the plants are expected to use reverse osmosis technology.) Current membrane suppliers include Dow, Hydranautics, and Toray. The Japanese firm Yokogawa is reportedly the market leader in supply of process controls for desalination plants. Siemens and ABB also supply controls.

Competition:

Seven of the large Spanish construction companies have subsidiaries that build and operate desalination plants. They are (with the names of their desalination subsidiaries): OHL/Inima, FCC/Aqualia, Acciona/Necso and Infilco, Sacyr/Sadyt, ACS/Tedagua, Ferrovial/Cadagua, and Abengoa/Befesa. These firms are formidable competitors in their home market and in third-country markets.

U.S. firms interested in bidding on Spanish environmental projects should be present in Spain either directly through subsidiaries or branches, or indirectly through a local agent, distributor or representative. A good agent should be able to provide technical assistance and local servicing, and should be well acquainted with local political dynamics, key decision-makers and business customs.

There is usually a consortium formed to compete for these type desalination projects, which groups construction, engineering, and membranes companies. The membranes supplier is usually included in the consortium due to the high cost of these products and the importance of the smooth functioning of the project, as well as to ensure reliable maintenance.

U.S. companies interested in selling their technology and/or equipment in the Spanish market should consider a partnership with an engineering or construction firm well established in the marketplace. Usually, these large companies operate in both public and private markets.

End Users:

A Spanish Government company called AcuaMed has been established to plan and execute the A.G.U.A. Program. Spanish Government tenders are typically awarded to big local construction firms (see list above), who then become the buyers and end users of American desalination products and services. The most important construction firms in the Spanish market have engineering departments that function as consulting companies, so they have to be aware of products available in the market.

Market Access:

There are no formal barriers to Spanish market entry. The major hurdle for U.S. suppliers is developing a competitive bid in local government tenders. Local partnerships are essential in this process. Another informal barrier are local government tender requirements that imply contractual risks that general counsels of U.S. firms find very difficult.

¹ Ministerio de Medio Ambiente, 2000

Spain applies the current EU Common External Tariff on imports from third countries, including the United States. In addition, a 16 percent VAT is levied on all water treatment equipment, whether produced domestically or imported. European suppliers, with their lower transportation costs, enjoy an additional advantage as Spanish import duties (zero for EU-member countries) and VAT are levied on the CIF value of the item imported.

In general, foreign products are imported by irrevocable letter of credit. Once there is an established relationship between exporter and buyer, other forms of payment can be negotiated. Payment practices in Spain are cash and 60, 90 and 120 day terms. However, with large projects and in dealing with the central and autonomous governments and municipalities, payment conditions are established on a case-by-case basis. Payment by central, regional and municipal governments can take up to nine months.

Import procedures are governed by international trade regulations, and technical specifications are essentially those established by the EU, as they have been incorporated into Spanish regulations. In most cases, specifications satisfying U.S. requirements also meet Spanish ones and, according to trade sources, only electrical parts sometimes require adaptation. Electrical installations in Spain operate on 50-hertz cycles. Power is supplied to 125V and 220V (single phase) and 125V, 220V and 380V (triple phase).

Opportunities:

Spain offers a good market for U.S. firms supplying water treatment equipment in general and desalination equipment in particular, especially now that several projects will be financed and awarded by the Spanish government. U.S. products/equipment enjoy a reputation for being state-of-the-art and competitively priced. The A.G.U.A. Program, with plans for construction of several new desalination plants and the modernization of old ones, creates significant opportunities for U.S. suppliers.

Several medium and large Spanish construction companies seek U.S. partners to compete for the new desalination plants to be built under the A.G.U.A. Program. The Commercial Service Madrid can make introductions to such companies.

There are also significant sales opportunities to supply equipment, services and supplies directly to the large Spanish construction companies likely to be awarded the bulk of the new facilities.

Key Contacts/ Upcoming Trade Shows/Events

CS Madrid Custom Desalination Group Gold Key Service in Madrid, September 21 and 22, 2005. For full details and registration go to: <http://www.buyusa.gov/spain/en/desalination.html>

The following are listed as the top ten construction firms in Spain according to Fomento's 30,000 business directory:

Fomento de Construcción y Contratas www.fcc.es
Grupo Ferrovial www.ferrovial.es
ACS Actividades de Construcción y Servicio www.grupoacs.es
Acciona www.acciona.es
ACS Proyectos, Obras, y Construcción www.grupo.es
Obrascon Huarte Lain www.ohl.es
Sacyr Vallehermoso www.vallehermoso.es
Constructora San Jose www.grupo-sanjose.com
Vallehermoso Division Promoción www.vallehermoso.es
Inmobiliaria Urbis www.urbis.es

Other helpful web addresses for government offices or businesses mentioned in this report:

CEOE www.ceoe.es
Environmental Ministry (Ministerio de Medio Ambiente) <http://www.mma.es/>
BOE (Boletín Oficial del Estado) www.boe.es
Programa A.G.U.A. <http://www.mma.es/agua/entrada.htm>
ACUAMED www.acuamed.com
Agbar Group www.agbar.es
Thames Water www.thames-water.com
Pridesa www.pridesa.com
Trasagua www.trasagua.com
GE Osmonics (GE Water Technologies) www.gewater.com

Trade Events:

IFEMA, the Institucion Ferial de Madrid, is Spain's largest trade show organizer, and has an exhibition center measuring more than 5 million square feet. IFEMA organizes more than 70 trade shows, which are attended by 4 million visitors and 30,000 exhibitors annually. The venue is located just minutes away from Madrid's Barajas Airport, and is linked directly to Madrid's city center via subway. For more information on IFEMA and its shows, please visit www.ifema.es

As a U.S. company visiting or participating in IFEMA trade shows, you will have the support of the U.S. Commercial Service (CS) in Spain, a U.S. Government Agency dedicated to helping U.S. companies realize their full business potential in the lucrative Spanish market. CS Spain provides U.S. companies with advance information about upcoming trade events and tenders, and offers a wide array of business services to assist U.S. companies interested in entering the Spanish market. IFEMA and CS Spain have signed a collaboration agreement to provide with value added services to U.S. firms interested in visiting or exhibiting at IFEMA shows. CS Spain has an office space at the IFEMA exhibition center, which participating or visiting U.S. companies may use to meet potential business partners or organize small receptions and business events.

Some upcoming Trade Shows are listed below:

TEM/TECMA's Environmental Show at IFEMA www.tecma.ifema.es
SMAGUA Feria de Zaragoza www.feriazaragoza.com
PROMA Environmental Show at Feria de Bilbao www.feriadebilbao.com
ECOMED/POLUTEC Environmental Show at Feria de Barcelona www.ecomedpollutec.com

For more information on this sector and CS Spain value-added services, please contact:

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